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Induction of Aryl Hydrocarbon Hydroxylase in Lymphocytes and Pulmonary Macrophages.

The objectives of this research are to study induction of aryl hydrocarbon hydroxylase (AHH) in mitogen-stimulated peripheral blood lymphocytes and in pulmonary alveolar macrophages (PAMs) from healthy volunteers, including both nonsmokers and cigarette smokers. Induction of AHH in both lymphocytes and PAMs after in vitro incubation with water soluble extracts of tobacco smoke will also be employed with short-term cultures. Finally, studies will be performed to determine the ability of PAMs from nonsmokers and smokers to mediate macrophage-dependent lymphocyte responses in vitro. These investigations will examine the possibility of individual variation in inducibility of the broad function microsomal enzyme system AHH.

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